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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/610,116

06/30/2000

Ben Speiser

FORE-65

4695

7590

05/17/2005

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EXAMINER

KADING, JOSHUA A

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/610,116

Applicant(s)

SPEISER ET AL.

Examiner

Joshua Kading

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,5-12 and 15-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5-12 and 15-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1, 5, and 19 are objected to because of the following informalities:  
  
Claim 1, line 10, the close parentheses after "480G" should be deleted.  
  
Claim 5, line 1 should indicate dependence from claim 1 instead of claim 4.  
  
Claim 19, line 4, "packets is distributed" should be changed to --packets are distributed--.  
  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1, 5-11, 15-17, and 22-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, 5-11, 15-17, and 22-29 all disclose, "the modes 40G, 80G, 120G, 240G slow, 240G fast or 480G." As in previous Office Actions, it has been indicated that these terms are not clearly defined in the specification as originally filed and it is not clear from the claim language what these terms mean. In response, applicant indicated that these terms are well known in the art and therefore are well defined enough for one of ordinary skill in the art (see applicant's REMARKS, page 8, filed 24 November 2003).

However, applicant's mere assertion that the terms are well known to one of ordinary skill in the art must be corroborated through the appropriate filing of an oath or declaration swearing to such a fact. See MPEP § 716. Until such a document is received and reviewed, the terms above suffer from vague and indefinite issues not only because they are not clearly defined in the specification, but also because they could have several different meanings. For example; 40G could be 40 gigabytes, 40 gigabits, 40 gigabytes/second, or 40 gigabits/second. All of the foregoing definitions have significantly different implications in the way they are used and thus create a situation that does not have well defined metes and bounds.

***Claim Rejections - 35 USC §.103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,124,978, Chao in view of U.S. Patent 6,647,019 B1, McKeown et al. (McKeown).

Regarding claim 12, Chao discloses, "a method for switching fragments of packets comprising the steps of: creating assignments between transmitters and receivers of a network (*figure 2, information sent across network connections 235 to*

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*receivers of port 260 and transmitters of port 270 and are controlled by element 390 which creates assignments between them as described in col. 12, lines 59-col. 13, lines 1-3); changing a mode of fabrics, port cards and the network no more than one step up or down in the mode sequence at a time (col. 12, lines 45-58 where lines 215 are connected to fabrics 210 and are changed between different modes, such as packets test normal operations, since these modes are either in operation or not, they are always changed one step at a time, from on to off or vice versa); changing the assignments of the transmitters and receivers according to the mode and reusing the transmitters and receivers (col. 12, lines 45-col. 13, lines 1-3); and transferring...[information] between fabrics and port cards with the transmitters and receivers of the network (figure 2 where information from the fabrics 210 travel to the receivers 260, to transmitters 270 and out the ports 260 and 270)."*

However, Chao lacks what McKeown discloses, the transferred information "the fragments of packets (col. 5, lines 51-55 where the cells of an ATM system, such as the one of Chao, can carry cells containing fragments of packets)."

It would have been obvious to one of ordinary skill in the art at the time of invention to include the fragments of packets for the purpose of transmitting a packet longer than the fixed packet length of the ATM protocol. The motivation for fragmenting a large packet for transmission is for greater versatility in transmitting data, for example, transmitting IP data over an ATM network.

Regarding claim 18, Chao discloses, "a switch comprising: a port card (*figure 2, elements 260 and 270*); a network connected to the port card, the network having transmitters and receivers that communicate with each other and have assignments between each other (*figure 2, information sent across network connections 235 to receivers of port 260 and transmitters of port 270 and are controlled by element 390 which creates assignments between them as described in col. 12, lines 59-col. 13, lines 1-3*); a plurality of fabrics, each of which is connected to the port card through the network to send and receive [information] to or from the port card, the port card, fabrics and network having a plurality of modes of operation (*col. 12, lines 45-58 where lines 215 are connected to fabrics 210 and are changed between different modes, such as packets test normal operations, since these modes are either in operation or not, they are always changed one step at a time, from on to off or vice versa*); and a control mechanism connected to the transmitters and receivers which changes the assignments according to the mode, the control mechanism changing the mode and reusing the transmitters and receivers (*figure 2, element 290 controls the operation of the switching system and changes assignments as in col. 12, lines 45-col. 13, lines 1-3*)."

However, Chao lacks what McKeown discloses, where the information is "stripes of fragments of a packet (*col. 5, lines 51-55 where the cells act as stripes of an ATM system, such as the one of Chao, and can carry cells containing fragments of packets*)."

It would have been obvious to one of ordinary skill in the art at the time of invention to include the fragments of packets for the purpose of transmitting a packet

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longer than the fixed packet length of the ATM protocol. The motivation for fragmenting a large packet for transmission is for greater versatility in transmitting data, for example, transmitting IP data over an ATM network.

Regarding claim 19, McKeown lacks what Chao further discloses, "wherein the plurality of fabrics, each of which is connected to the port card through the network to send and receive stripes of fragments of a packet to or from the port card, the port card, fabrics and network having a plurality of modes of operation (*every network has at least two modes of operation -- transmitting and receiving*) so data from the packets are distributed evenly across all fabrics so the switch adds bandwidth by adding fabrics and each fabric need not increase its bandwidth capacity as the switch increases bandwidth capacity (*figure 18, element 1810 whereby statistical multiplexing the data, an even distribution of data is ensured when transmitting data, this fact is further supported in U.S. Patent 5,930,254, Liron et al., col. 12, lines 18-19*)."

It would have been obvious to one of ordinary skill in the art at the time of invention to include the transmitting and receiving of the switching system and ensuring evenly distributed packets across the fabrics for the purpose of reducing cell loss (*Chao, col. 40, lines 49-53*). One motivation for reducing cell loss in a switching system is to improve efficiency by not having to retransmit lost cells.

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6. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chao and McKeown as applied to claim 19 above, and further in view of U.S. Patent 5,311,509, Heddes et al. (Heddes).

Regarding claim 20, Chao and McKeown lack what Heddes discloses, "the network is a gigabit network, the transmitters are gigabit transmitters and the receivers are gigabit receivers (*col. 4, lines 25-27 where it is implied by that the switch includes transmitters and receivers and which includes a gigabit network*)." It would have been obvious to one with ordinary skill in the art at the time of invention to combine the gigabit network with the switch of claim 19 for the purpose of transmitting data at gigabit speeds. The motivation for transmitting in a faster network is to increase overall throughput.

Regarding claim 21, McKeown and Heddes lack what Chao further discloses, "wherein the network includes a mux structure that makes the assignments between transmitters and receivers (*figure 2, element 220 as read in col. 13, lines 1-3*)." It would have been obvious to one of ordinary skill in the art at the time of invention to include the mux structure for the same reasons and motivation as in claim 20.

***Allowable Subject Matter***



7. Claims 5-11, 15-17, and 22-29 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

### ***Response to Arguments***

9. Applicant's arguments filed 28 December 2004 have been fully considered but they are not persuasive.

Applicant's main argument with regard to the claimed invention is of the term "stripes of fragments of packets" (see REMARKS, page 10, last line-page 11). It is asserted that the terms "stripes" and "stripping" are "very specific definition[s] to one skilled in the art to which Examiner cannot ignore." As noted in the above rejections, the term "stripes of fragments of packets" is accounted for in McKeown as cells containing fragments of packets. Thus, the term "stripes" have not been ignored.

It should be further noted that applicant's assertion that a term of art is well known and the invention should be interpreted in light of this definition is not a sufficient argument to overcome a rejection. See MPEP § 2145.I. In addition, there is no specific definition of what a "stripe" is in applicant's invention. Therefore, a broad interpretation is given to the term unless there is an appropriate oath or declaration defining the term as it is known to one of ordinary skill in the art.

**Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 5,764,641, Lin strongly suggests that a cell is a portion of a fragment of a packet, see figures 3A, 3B, and 4, and col. 7, lines 43-46.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (571) 272-3070. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joshua Kading  
Examiner  
Art Unit 2661

May 10, 2005



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